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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,699	12/29/2003	Yeong Soo Nam	10125/4129	2139
757	7590	10/20/2006	EXAMINER	
BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610			SCHECHTER, ANDREW M	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. .

10/748,699

Applicant(s)

NAM ET AL.

Examiner

Andrew Schechter

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18,20-27 and 29-36 is/are pending in the application.
- 4a) Of the above claim(s) 11-16 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17,18,20-27 and 29-36 is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8 August 2006 has been entered.

Response to Arguments

2. Applicant's arguments filed 8 August 2006 have been fully considered but they are not persuasive.

The applicant argues that *Lee* does not disclose the data line overlapping some of the bent portion of the gate line, as recited in claim 1. This is not persuasive. The applicant refers to the inward bend of the gate electrode on top of the gate line, which is not the bent portion of the gate line overlapping the data line referred to by the examiner. There appears to be a difference in how the claim language is being interpreted: the applicant seems to interpret "bent portion", and "portion bent angularly and inwardly", as referring to an angle in an edge of the gate line. The examiner does not see a "bend" in the applicant's gate line, merely a straight gate line with a notch in it. (If anything can be said to bend, it would be the edge of the gate line.) The examiner

has therefore been interpreting the term "bent portion" to refer to the entire portion of the gate line where the notch is, not merely a section where the edge of the gate line has an angle or a non-horizontal segment.

Similarly, for claim 8 the applicant argues that the drain electrode is not overlapped with the bent portion of the gate electrode, since it crosses a straight edge of the gate electrode. Again, this is not persuasive to the examiner, who is interpreting the bent portion to be the whole notch portion, not just a particular angle in the edge of the gate electrode.

The previous rejections over *Lee* are therefore maintained, with claims 1-10 being rejected under 35 USC 112, 2nd paragraph in view of the apparent confusion over the scope of the claims.

The applicant has submitted a certified translation of their priority document which overcomes the rejections in view of *Kang*, as they argue. These rejections are therefore withdrawn.

The applicant has amended to overcome the previous rejections over *Ko* in view of *Dohjo*, as suggested by the examiner. These rejections are therefore withdrawn.

The applicant has amended to overcome the previous rejections over *Kim* in view of *Dohjo*. These rejections are therefore withdrawn. However, the amendment to claim 1 conflicts with the limitation of claim 2, which is now rejected under 35 USC 112, 1st paragraph.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 2 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites that the bent portion has substantially straight segments and claim 2 adds the limitation that at least a section of the bent portion is curved. The specification and figures do not disclose this combination of limitations; instead, it only discloses the bent portion having either straight segments or being curved. Claim 2 is therefore rejected.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As discussed above, there appears to be a difference of opinion on the scope of the phrase "having a predetermined portion bent angularly and inwardly, ... bent portion..." in claims 1 and 8. The examiner's interpretation is clear from the wording of the previous rejections, and he has clarified his understanding above while laying out a possible interpretation which the applicant may be using. Clarification by the applicant is needed on this point.

Claims 2-7, 9, and 10 depend from claims 1 and 8.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 3-8 are rejected under 35 U.S.C. 102(b) as being anticipated by *Lee*, US 2002/0163602.

Lee discloses [see Figs. 3 and 4, for instance] an LCD comprising a substrate [31], a gate line [32] with a portion bent angularly and inwardly [on the bottom, the region not marked "S" in Fig. 3], wherein the predetermined bent portion has substantially straight segments, a gate electrode [36] projecting from the gate line, a gate insulating layer [42], a data line [34] overlapping some of the bent portion of the gate line, a source electrode [38] projecting from the data line, a drain electrode [see

Fig. 3], an active layer [44, 46] below the data line, source electrode, and drain electrode, and a pixel electrode [52]. Claim 1 is therefore anticipated.

The active layer overlaps an upper side of the gate electrode and predetermined portions of the source and drain electrodes, so claim 3 is also anticipated. The data line is made of Cr or Mo [paragraph 0081], so claim 4 is also anticipated. The pixel electrode is made of ITO [paragraph 0087], so claim 5 is also anticipated. There is an organic or inorganic [paragraph 0085] passivation layer [48] with a first contact hole to the drain electrode [see Fig. 5], so claims 6 and 7 are also anticipated.

Considering the additional limitations of claim 8, Lee also discloses the gate electrode having a portion bent angularly and inwardly [on the right side of the gate electrode, compared to the standard rectangular gate electrode], with the drain electrode overlapped with the bent portion of the gate electrode, so claim 8 is also anticipated.

Allowable Subject Matter

9. Claims 9 and 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. Claims 17, 18, 20-27 and 29-36 are allowed.

11. The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose the device of claim 9, in particular the additional limitation that the bent portion of the gate line is curved. Claim 9 would therefore be allowable if rewritten appropriately and if the rejection under 35 USC 112 is overcome.

The prior art does not disclose the device of claim 10, in particular the additional limitation that a section of the bent portion of the gate electrode is curved. Claim 10 would therefore be allowable if rewritten appropriately and if the rejection under 35 USC 112 is overcome.

The prior art does not disclose the device of claim 17, in particular the limitation that there is a notch formed in a boundary of a second side of the gate line, disposed between an edge of the gate electrode and an edge of the data line, such that the length of the boundary where a portion of the notch overlaps the data line is greater than a width of the data line, wherein the data line is adjacent to the gate electrode. Claim 17 is therefore allowed, as are its dependent claims 18 and 20-26.

The prior art does not disclose the device of claim 27, in particular the additional limitation (amended from the previous claim 28) that a boundary of the gate electrode that overlaps the drain electrode is greater than a width of the drain electrode. Claim 27 is therefore allowed, as are its dependent claims 29-36.

Election/Restrictions

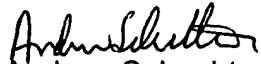
12. Claims 11-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Schechter whose telephone number is (571) 272-2302. The examiner can normally be reached on Monday - Friday, 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Nelms can be reached at (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Andrew Schechter
Primary Examiner
Technology Center 2800
15 October 2006